AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method of communicating among nodes in a wireless network, comprising:

assigning a timeslot to each of a plurality of nodes in the wireless network, the timeslot being a time for a corresponding one of the plurality of nodes to receive any messages transmitted by all other nodes of the plurality of nodes to the one node;

assigning a modulation scheme to each of the plurality of nodes;

transmitting [[a]] the messages from at least one all of the other of the plurality of nodes, using the assigned modulation scheme, to at least one destination node within the plurality of nodes, the messages being transmitted during a timeslot assigned to the at least one destination node; and

receiving, at the at least one destination node, [[a]] the messages from the at least one all of the other of the plurality of nodes.

2. (Original) The method of claim 1, wherein the assigning comprises assigning one of a plurality of transmit spreading codes to each of the plurality of nodes.

3. (Original) The method of claim 1, wherein the assigning comprises assigning one of a plurality of hop sets to each of the plurality of nodes.

4. (Original) The method of claim 1, wherein:

the assigning comprises assigning a unique transmit spreading code to each of the plurality of nodes.

5. (Original) The method of claim 1, wherein:

the transmitting a message comprises transmitting messages from a plurality of transmitting nodes, and

the receiving a message comprises receiving, at one of the at least one destination node, the respective messages from the plurality of transmitting nodes.

6. (Original) The method of claim 1, wherein the receiving a message comprises receiving, at a plurality of the at least one destination node, messages from a plurality of transmitting nodes.

7. (Original) The method of claim 1, wherein the assigning comprises assigning one of a plurality of orthogonal or nearly orthogonal transmit spreading codes to each of the plurality of nodes.

8. (Original) The method of claim 7, wherein the assigning further comprises assigning one of K orthogonal or nearly orthogonal transmit spreading codes to each node, where K is a number less than a number of nodes in the wireless network.

9. (Original) The method of claim 7, further comprising:

waiting, after the transmitting, for an acknowledgement indicating correct receipt; and

when the acknowledgement is not received after a predetermined period of time:

selecting a new transmit spreading code; and

retransmitting the message.

10. (Original) The method of claim 1, wherein:

the assigning comprises assigning a plurality of one of orthogonal or nearly orthogonal transmit spreading codes, carrier frequencies, and hop sets to each node of the plurality of nodes, each of the nodes having a plurality of transmitters and a plurality of receivers,

the transmitting comprises transmitting a plurality of messages from one of the nodes to the at least one other of the nodes, and

the receiving comprises receiving, from the one of the nodes, the plurality of messages.

11. (currently amended) A network comprising:

a plurality of nodes, each of the plurality of nodes having an assigned modulation scheme, each node of the plurality of nodes comprising:

at least one transmitter configured to transmit to a destination node using the assigned modulation scheme during a timeslot assigned to the destination node; and

a plurality of receivers configured to receive any a plurality of messages transmitted from all other nodes in the plurality of nodes to the each node during a timeslot assigned to the each node.

12. (original) The network of claim 11, wherein each of the nodes further comprises:

a plurality of transmitters, each of the transmitters being configured to transmit using one of a plurality of transmit spreading codes, a plurality of carrier frequencies, and a plurality of hop sets.

13. (original) The network of claim 11, wherein each one of the receivers is configured to demodulate each of the received messages using one of a transmit spreading code of the plurality of transmit spreading codes, a carrier frequency of the plurality of carrier frequencies, and a hop set of the plurality of hop sets.

14. (currently amended) A network comprising:

means for transmitting in the network that includes a plurality of nodes messages

from more than one of the nodes using a plurality of modulation schemes; and

means for receiving in one of the nodes a plurality any of the messages from all of

the more than one of the other nodes in the plurality of nodes transmitted to said one of

the nodes only during a receiving timeslot assigned to said one of the nodes.

15. (currently amended) A machine computer-readable storage medium having

computer executable instructions encoded recorded thereon instructions for at least one

processor of a node in a network, such that when [[the]] at least one processor of the

computer reads and executes the instructions, [[the]] a network node including the

processor is configured to:

receive any messages from all other nodes in the network transmitted to the node

during a receive timeslot assigned to the node.

16. (currently amended) A method comprising:

receiving, by a node in a network during a TDMA timeslot assigned to the node

for receiving, a plurality of any messages transmitted by a plurality of all other nodes in

the network to the node, each of the other nodes transmitting messages to the node during

the timeslot assigned to the node, each of the messages being transmitted using a

different orthogonal or nearly orthogonal transmit spreading code.

17. (currently amended) A method for simultaneously receiving a plurality of messages in a wireless network node, the method comprising:

receiving, by a node in a network during a TDMA timeslot assigned to the node for receiving, ~~a plurality of~~ any messages transmitted by ~~a plurality of~~ all other nodes in the network to the node, each of the other nodes transmitting messages during the timeslot assigned to the node, each of the messages being transmitted using a different carrier frequency.

18. (currently amended) A method for communicating among a plurality of ultra-wideband radios functioning as wireless network nodes, the method comprising:

using one of a plurality of transmit spreading codes to transmit any messages to at least one of the ultra-wideband radios during a timeslot assigned to the at least one of the ultra-wideband radios, the timeslot being for receiving the messages from ~~certain~~ all of the other ultra-wideband radios of the plurality of ultra-wideband radios ~~to at least one other of the ultra-wideband radios in a wireless network during a timeslot assigned to the at least one other of the ultra-wideband radios for receiving the messages~~; and

receiving and demodulating the messages, using the one of the plurality of the transmit spreading codes at the at least one other of the ultra-wideband radios during the timeslot.

19. (currently amended) A node in a network of a plurality of nodes, said node comprising:

at least one transmitter configured to transmit to a destination node in said

plurality of nodes using an assigned modulation scheme during a timeslot assigned to the

destination node; and

a plurality of receivers configured to receive ~~a plurality of~~ any messages from all

other nodes in said [[a]] plurality of nodes transmitted to the node during a timeslot

assigned to the node.

20. (original) The method of claim 1, wherein the timeslot is the same for the

each of the plurality of nodes.

21. (original) The method of claim 1, wherein the timeslot is different for the

each of the plurality of nodes.

22. (original) The method of claim 1 wherein the timeslot is the same for certain

of the plurality of nodes and is different for each of the plurality of nodes other than the

certain nodes.

23. (previously presented) In an ad hoc, wireless network having a plurality of

nodes, a method of communicating amongst said nodes comprising:

assigning a timeslot to each of said plurality of nodes, said timeslot being the time when said each of said plurality of nodes is capable of receiving messages from all other of said plurality of nodes;

assigning a modulation scheme to said each of said plurality of nodes;

transmitting said messages from at least one of said all other of said plurality of nodes in accordance with said modulation scheme to at least one of said each of said plurality of nodes during said timeslot assigned to said at least one of said each of said plurality of nodes; and

receiving said messages at said at least one of said each of said plurality of nodes.